

CLAIMS:

1. A microelectronic assembly comprising:

(a) a connection component including a support structure, one or more leads attached to said support structure and projecting from said support structure, each said lead having an elongated section spaced from said support structure so that said elongated section is movable with respect to support structure and a jacket of a dielectric material surrounding each said lead over at least a part of the elongated section of that lead; and

(b) a semiconductor chip having contacts thereon, at least some of said contacts on said chip being connected to at least some of said elongated sections of said leads.

2. An assembly as claimed in claim 1 further comprising reference conductors surrounding and extending coaxially with said elongated sections of said leads and insulated therefrom by said jackets of dielectric material, said reference conductors including a coating of an electrically conductive material overlying at least parts of at least some of said dielectric jackets.

3. An assembly as claimed in claim 2 wherein said support structure includes a dielectric element and electrically conductive traces connected to said leads and extending across said dielectric element.

4. An assembly as claimed in claim 3 wherein said support structure further comprises an electrically conductive potential reference element connected to at least some of said reference conductors.

5. An assembly as claimed in claim 2 wherein said support structure includes a dielectric element, first electrically conductive traces connected to said leads and extending across said dielectric element, and second electrically conductive traces extending along said dielectric

element and connected to at least some of said reference conductors.

6. An assembly as claimed in claim 5 wherein said chip includes one or more devices having a differential signal path connection to at least one pair of said contacts, and wherein said at least one pair of contacts is connected through a lead to a first trace and is connected through a conductive jacket of said lead to a second trace.

7. An assembly as claimed in claim 2 wherein at least some of said reference conductors are connected to at least some of said contacts on said chip.

8. A connection component as claimed in claim 1 or claim 2 wherein said elongated sections have cross-sectional dimensions less than about 100  $\mu\text{m}$ .

9. An assembly as claimed in claim 8 wherein said dielectric jackets are about 12 $\mu\text{m}$  to about 50 $\mu\text{m}$  thick.

10. An assembly as claimed in claim 9 wherein said coatings of electrically conductive material are less than about 25 $\mu\text{m}$  thick.

11. An assembly as claimed in claim 1 wherein said chip has a front surface and said contacts are disposed on the front surface of the chip, and wherein at least a part of said support structure overlies the front surface of the chip.

12. An assembly as claimed in claim 11 wherein said support structure is movable with respect to said chip.